(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 27 January 2005 (27.01.2005)

PCT

(10) International Publication Number WO 2005/008768 A2

(51) International Patent Classification7:

H01L 21/66

(21) International Application Number:

PCT/US2004/022347

(22) International Filing Date:

12 July 2004 (12.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/486,566

11 July 2003 (11.07.2003)

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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

[Continued on next page]

(54) Title: A SYSTEM AND METHOD FOR DETERMINING A CROSS SECTIONAL FEATURE OF A STRUCTURAL ELE-MENT USING A REFERENCE STRUCTURAL ELEMENT

470 Obtain a waveform representative of detection signals generated as a result of an interaction between a scanning electron beam and a structural element.

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Calculate at least three points - a first point that is characterized by a maximal derivative value, a lower point and an upper point that are characterized by a predefined derivative values.

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Determine a location point in response to an intersection between a height threshold and a line that is drawn between the upper and lower points.

(57) Abstract: A system and method for determining a cross sectional feature of a measured structural element having a sub-micron cross section, the cross section is defined by an intermediate section that is located between a first and a second traverse sections. The method starts by a first step of scanning, at a first tilt state, a first portion of a reference structural element and at least the first traverse section of the measured structural element, to determine a first relationship between the reference structural element and the first traverse section. The first step is followed by a second step of scanning, at a second tilt state, a second portion of a reference structural element and at least the second traverse section of the measured structural element, to determine a second relationship between the reference structural element and the second traverse section. The method ends by a third step of determining a cross sectional feature of the measured structural element in response to the first and second relationships.

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, HD, HL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GII, GM, KB, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Buropean (AT, BB, BG, CH, CY, CZ, DB, DK, BB, BS, FI, FR, GB, GR, HU, HB, FT, LU, MC, NL, PL, PT, RO, SB, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NB, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

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